



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

RBE1X56-136-858-11
Job Sheet 189528



Part No: RBE1X56-136-858-11

Job Qty: 2 pcs

Part Name: Square Drive Gear



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 1/25/19

Job Tracking No:

Due Date: 2/28/19

Created By: Marie Lajeunesse

Type: SOLD

Description:

Note: DWG RBE1X56-136-858 Rev.3 IPP Rev. A 19.01.08 New issue DP Verify DD

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier	Sign-off
					Setup Hrs	Run Hrs		
100	Purchasing	2 pcs	2/28/19	2/28/19	0.00	0.00	Purchasing - 1 Purchasing - 2 Purchasing - 3	APR 30 2019
110	Packaging 2-1 - Receive - B4B	2 pcs	2/28/19	2/28/19	0.00	0.00	Packaging 2 - 1 - B4B Packaging 2 - 2 - B4B Packaging 2 - 3 - B4B	APR 30 2019
120	QC 6	2 pcs	2/28/19	2/28/19	0.00	0.00	QC 6 - 38 QC 6 - 42 QC 6 - 9 QC 6 - 68	MAY 02 2019 DAS 40 9-89
130	Packaging 3-1 - Stock - B4B	2 pcs	2/28/19	2/28/19	0.00	0.00	Packaging 3 - 1 - B4B Packaging 3 - 2 - B4B Packaging 3 - 3 - B4B Packaging 3 - 4 - B4B Packaging 3 - 5 - B4B	DAS 28 9-89
140	QC 21 - SA	2 pcs	2/28/19	2/28/19	0.00	0.00	QC 21 - SA - 21	MAY 06 2019 DAS 21 9-89

Part Op 100 - Issue P/O to PJ MACHINAGE; P/O 042423 - Manufacture RBE1X56-136-858-11 as per DWG. -Certificate Descriptions: of Conformity is required
110 - Certificate of Conformity is required

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
RBE1X56-136-858-11P	Square Drive Gear	2 (1 ea)	100-Purchasing	SI76775

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
100-Purchasing	RBE1X56-136-858-11P	2	0	0

Entered: _____ Date: _____

WORK ORDER NON-CONFORMANCE / ROUTE UPDATE



NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐		
Date : _____	Sequence #: _____	QTY Affected : _____		MRB (QSI042) ☐
Description Work Order Deviation		Disposition		Completed By
				Lead hand / Supervisor
				QC / QA Coordinator
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Ir ☐ Drill Holes ☐ Fit/Function ☐		FAULT CATEGORY ☐ Positioned Wrong		
Other/Details: _____		 Container No: S176776 Part: RBE1X56-136-858-11 Job No: 189528 Serial No/Batch: S176776 Revision: 3 Inspector: Exp Date: Instructions:		

Part Specifications
Specifications could not be found.

Plex 1/25/19 1:25 PM Dart.lajeunesse.marie

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

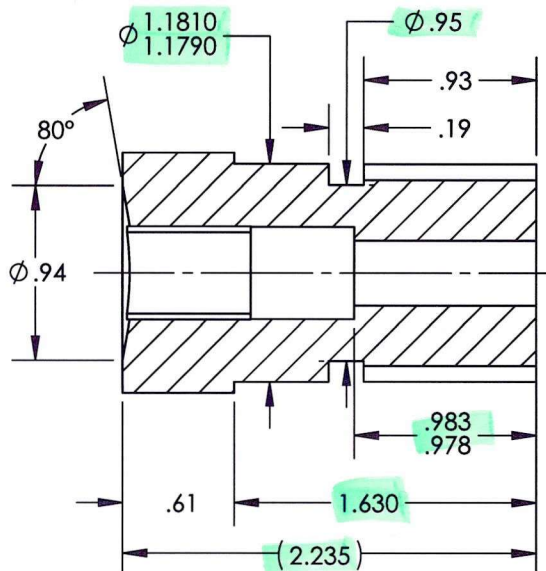
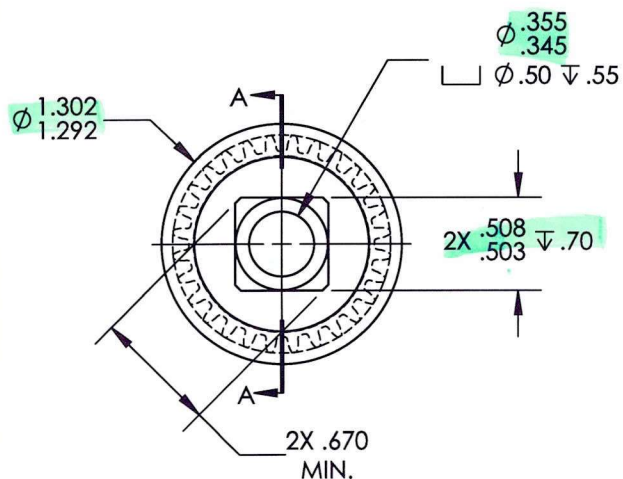
NCR No. _____

Route update only ☐

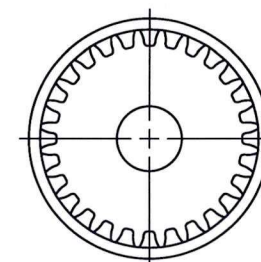
Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QS1042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐ ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled		FAULT CATEGORY ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
3	17-0015	-11 ADDED DIM .983/.978, ADDED FINISH SPEC QMSI-6.2.2, B.O. REV D. DELETED VALUES ENTERED NOTE.	1/30/2017	RJC	JAG



SECTION A-A



EXTERNAL SPUR GEAR DATA

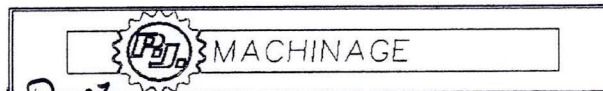
No. of TEETH	28
PITCH DIAMETER	1.102
MODULE	1
PRESSURE ANGLE	14.5°
MAJOR DIAMETER	1.1810 1.1790
MINOR DIAMETER	1.004
SPAN OF 3 TEETH	.296
FILLET RADIUS	.012

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 189528 MJS
1901-25

(11)

SQ. DR. GEAR

DART AEROSPACE	
TITLE: TORQUE MULTIPLIER & COUNTER HOLDER	
DWG NO.: RBE1X56-136-858-11	REV: 3
MAT'L: 4140/4142	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TREAT: RC 50-54	.XXX ± .005 FRACTIONS ± 1/8
FINISH: BLACK OXIDE	.XX ± .01 ANGLES ± 5°
SPEC: QMSI-6.2.2, B.O. REV D	.X ± .1 SURFACES = 125/✓
DRAWN BY: WALLRICH	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
CHECKED: DD 07/20/2017	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
OPPS APPR: AA 07/21/2017	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
QA APPR: JL 07/24/2017	USED ON MODEL
APPROVED: JAG 07/26/2017	EC135, EC635, H135
SCALE: 1:1	DATE: 4/16/2015
SHEET 8 OF 14	

CLIENT: 628JOB No.: 7470-BPLAN No.: ABEIX56-136-858-1 Rev3P.O.: PO42423QUANTITÉ: 2 NOM DE LA PIÈCE:

CONTRÔLE DE QUALITÉ

Square Drive GearMATÉRIEL: 4140DATE: 04/03/2019FORMAT No.: 001PAGE No.:

DIMENSIONS DE DESSIN ET TOLERANCE

PIÈCE No.	1.181 Ø	1.302	1.630	2.235	.950	.508	.7 ↓	.983	Ø .355
	1.179 Ø	1.292				.509		.978	.345

DIMENSIONS DE LA PIÈCE

1	1.180	1.297	1.630	2.236	.948	.507	.699	.9815	Ø .345
2	1.180	1.297	1.630	2.236	.948				
	1.180	1.296	1.630	2.235	.949	.507	.698	.982	.345

OBSERVATION: _____

SIGNATURE RESPONSABLE:

Benoit Mayer



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

PO042423



Supplier: PJM001-VC
P.J. Machinage
1381 Rte Cite-Des-Jeunes
St-Lazare
QC
J7T 2B8
Phone: 450-455-0705

PO No: PO042423
PO Date: 1/29/19
Due Date: 2/28/19
Purchase Order Revision:
Revision Date:
Ship-To Contact: Lussier, Patrick

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

Via: Ground
Pymt Terms: Net 30
Freight Terms:
Special Comments:

Revision

Items

Line Item	Job	Part	Supplier Part No	Item No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	189525	RBE1X56-136-858-27P			Counter Holder REV 3	Firmed	-	4/5/19	2 Ea	0 Ea	2 Ea	\$1,115.00/Ea	\$2,230.00
2	189528	RBE1X56-136-858-11P			Square Drive Gear REV 3	Firmed	-	4/5/19	2 Ea	0 Ea	2 Ea	\$520.00/Ea	\$1,040.00
3	189529	RBE1X56-136-858-13P			Gear Planet REV 3	Firmed	-	4/5/19	18 Ea	0 Ea	18 Ea	\$110.00/Ea	\$1,980.00
4	189533	RBE1X56-136-858-3P			Housing REV 3	Firmed	-	4/5/19	2 Ea	0 Ea	2 Ea	\$1,200.00/Ea	\$2,400.00
5	189536	RBE1X56-136-858-9P			Gear Sun REV 3	Firmed	-	4/5/19	5 Ea	0 Ea	5 Ea	\$203.00/Ea	\$1,015.00
Grand Total:												\$8,665.00	

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Order Notes

Procurement Quality Clauses
A005 RIGHT OF ENTRY
A008 FIRST ARTICLE INSPECTION (FAI) BY SELLER, (DOCUMENTATION SENT TO DART AEROSPACE)
A012 CHEMICAL AND PHYSICAL TEST REPORTS
A016 PERSONNEL QUALIFICATION
A017 RAW MATERIAL IDENTIFICATION (AS APPLICABLE)
A026 CERTIFICATION OF MATERIAL CONFORMANCE
A041 QUALITY MANAGEMENT SYSTEM
A042 DART NOTIFICATION BY SUPPLIER
A043 RETENTION OF QUALITY DOCUMENT

A048 COUNTERFEIT PARTS AVOIDANCE, DETECTION, MITIGATION AND DISPOSITION PROGRAM

A049 SUPPLIER AWARENESS

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Plex 4/5/19 9:01 AM dart.Lussier.Patrick

Shipping Order

29/01/2019

P.J. Machinage (9052 9470 Qc Inc).
1381, Rte Cité-Des-Jeunes,
St-Lazare, Qc
J7T 2B8

Tel. : 450 455-0705

Order : 7470
Reference : PO042423-S/O : 7470
Bid : 15661

Customer : 628

Ship To

Dart Aerospace Ltd.
Accounts payable
1270 Aberdeen St
Hawkesbury, Ontario
K6A 1K7

Same

Fax: 1 613 632-5246

Item No.	Description	Qty	Qty. Delivere	B/O Qty
001	RBE1X56-136-858-27 Rev 3 Counter Holder (J-7470-A)	2	2 ✓	Ø
002	RBE1X56-136-858-11 Rev 3 Square Drive Gear (J-7470-B)	2	2 ✓	Ø
003	RBE1X56-136-858-13 Rev 3 Gear Planet (J-7470-C)	16	18 ✓	Ø
004	RBE1X56-136-858-3 Rev 3 Housing (J-7470-D)	2	2 ✓	Ø
005	RBE1X56-136-858-9 Rev 3 Gear Sun (J-7470-E)	4	5 ✓	Ø

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P.J. Machinage retains ownership of all goods sold and other work-product delivered to or performed for its customer until full and complete payment of the underlying invoice, even in circumstances where the part to be machined or materials were provided by the customer. In cases where the part of materials belonged to the customer before it is remitted to P.J. Machinage for the purpose of performing work thereon, its delivery to P.J. Machinage shall entail a transfer of the underlying rights of ownership of the customer over said part or materials.

Shipping : Your truck
Package No : 3/4/2015
Merchandise Received: 3/4/2015

Ref. : Dicom : D44039756

PJ Machinage**Certificate of conformance****Sold to:**

Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON, K6A 1K7

Supplier address:

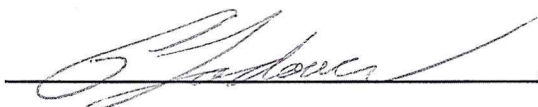
PJ Machinage
1381 Route Cité-Des-Jeunes
St-Lazare, Qc, J7T 2B8

Purchase Order: PO042423

This is to certify that the below names items were inspected and/or tested to your drawings, specifications and purchase order. Objective evidence are shipped with the products and are on file to support the verifications and/or tests and can be made available on request, unless otherwise noted.

<u>Part Number</u>	<u>Quantity</u>	<u>Description</u>
RBE1X56-136-858-27 ✓ Rev. 3	2 ✓	<u>Counter Holder</u>
RBE1X56-136-858-11 ✓ Rev. 3	2 ✓	<u>Square Drive Gear</u>
RBE1X56-136-858-13 ✓ Rev. 3	18 ✓	<u>Gear Planet</u>
RBE1X56-136-858-3 ✓ Rev. 3	2 ✓	<u>Housing</u>
RBE1X56-136-858-9 ✓ Rev. 3	5 ✓	<u>Gear Sun</u>

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 , April 03, 2019



7470-A-B-C-E FM-1020 Rev 20151005
Certificat de Conformité / Certificate of Compliance
(017942-1)

2455, Rue Halpern | Saint-Laurent | Québec | H4S 1N9
Tel: 514-335-3666 Fax: 514-335-3868
www.grouppaltech.com

Bon de Livraison / Packing Slip

017942 - 1

Livré à / Ship to

PJ MACHINAGE

1381 Rte de la Cité-des-Jeunes
St-Lazare, QC, J7T2B8
CANADA
Tel.: 450-455-0705 Fax.: 450-455-1167

Client / Customer:

PJ MACHINAGE

1381 Rte de la Cité-des-Jeunes
St-Lazare, QC, J7T2B8
CANADA
BUYER:

Date expédition Ship date		Créé Par Generated By	Transport / No de Compte Courier / Acc. No.		Bon de commande Client Customer Purchase Order No.				
01-Apr-2019		SPARTAKOS BOUNTOURIS			136165				
#Ligne Line#	No. de Série / # Pièce Part Number / Line Item Details Job # / Ref #	Description pièce(s)	CATG. U/M	Comm. /Ordered	Exp/ Shipped	Qté NC/ NC Qty	Qté Scrap/	À venir/ Back Order	
1	LOT 27 PARTS Rev.	LOT 27 PARTS 01 -OXIDE BLACK [OXIDE BLACK]	OXIDE-BLACK MIN-CHG	27	27	0	0	0	

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Notes Additionnelles / Additional Notes

Epaisseur réelle
Actual Thickness

Inspecteur Qualité
Quality Inspector

Réçu par
Received By

Nous certifions que les pièces énumérées ci-dessus ont été traitées en conformité avec votre commande et vos spécifications et rencontrent les exigences.
Notre responsabilité financière et légale ne sera pas supérieure au montant de la facture issue.

We hereby certify that the parts listed above have been process in accordance with your purchase order and specifications and are in conformance with your requirements.
Our financial and legal responsibility will not be higher than the amount of invoice.

7470-BD

METCOR INC.

560 BOUL. ARTHUR-SAUVÉ, ST-EUSTACHE, QC, J7R 5A8

Tél.: 450-473-1884

Télécopieur / Fax administration: 450-491-5488

Télécopieur / Fax production: 450-491-6454

Certificat de Conformité Certificate of Compliance

BON DE TRAVAIL order	CHARGEMENT load
334058	1

CLIENT / customer 238

P.J. MACHINAGE

1381 ROUTE LA CITÉ DES JEUNES

ST-LAZARRE

QC J7T 2B8

LIVRÉ À / shipped to:

P.J. MACHINAGE

1381 ROUTE LA CITÉ DES JEUNES

ST-LAZARRE

QC J7T 2B8

COMMANDE DU CLIENT customer po	CLASSIFICATION PIECE part classification	MATÉRIEL material	MAÎTRE D'OEUVRE prime contractor	PROGRAM
138104	N/A	4140		
SPECIFICATIONS DU PROCÉDÉ processing specifications				
SEL HARDEN				
HARDEN AND TEMPER				
EXIGENCE / requirement	SPECIFICATIONS / specified	TESTS EXÉCUTÉS / performed	RÉSULTATS DE TESTS / results	
HARDNESS	50 - 54 HRC	4	52 - 54 HRC	
(907)				
QUANTITÉ quantity	POIDS weight	DESCRIPTION DES PIÈCES parts description		
4	5	RBE1X56-138-858-3 (4) RBE1X56-138-858-3 / RBE1X56-138-858-11 1 BOITE DE CARTON		

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COMMENTAIRES / comments

APPROUVÉ par / Approved by:

DATE: 2019-03-15

Pierre Piché
Chief Inspector

